Hocker Company, 1910
Front Street west of Savannah Road
Lewes
Sussex County
Delaware

HAER DE-7

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, D. C. 20240

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HISTORIC AMERICAN ENGINEERING RECORD

H. W. Hocker Manufacturing Company Factory

HAER DE-7

Location:	Lewes, Delaware UTM: 18.487800.4291620 Quad: Lewes
Date of Construction:	1910-1911
Present Owner:	H. W. Hocker Company
Present Use:	Brush manufactory
Significance:	The Hocker family dominated the manufacture of tin products in Lewes, Delaware after moving there in 1899. J. W. Hocker pioneered special purpose machinery for the production of tin handle mucilage brushes. In 1975, Harold W. Hocker still manufactured brushes using special machinery in a small frame building behind his residence in Lewes.
Historian:	James Edmonson, 1976.

Introduction

The decision to document the H. W. Hocker Manufacturing Company was based on several factors. First, in terms of the industrial history of the Lewes area, the endeavors of the Hocker family represented a new departure. Brush making was one of the first successful small scale industries not related to either the agricultural interests of Sussex County or to the maritime occupation of Lewes. [1] Second, with respect to the metal fabrication industry, the story of the Hocker brush production is illustrative of the small family owned and operated factory. Success was dependent upon innovations introduced by family members and upon the limitation of their manufacture to a range of products not offered by the larger producers in the industry. Small size gave them the flexibility to respond to a wide variety of customer demands. Finally, the experience of the Hockers may help to illuminate the attitude of the small inventor-innovator toward the United States patent system.

Documentation of the H. W. Hocker Manufacturing Company focused on the process of brush production as practiced by Harold W. Hocker in his shop at 224 Front Street, Lewes, Delaware. The structure itself is of little significance. It was originally constructed to provide office and storage space, and altered for its present use. The special purpose tin forming machinery and brush making process are the most significant aspects of the enterprise.

Historical Development

John William Hocker moved his small tinsmith business, the Hocker Manufacturing Company, from Philadelphia to Lewes, Delaware in 1899. [2] He was perhaps influenced by the glowing description of Lewes as a prosperous town with every chance of becoming a great commercial city. An account of Lewes in the Delaware State Directory for 1894-95 made the following appeal to industrialists:

> Its manufacturing interests are, however, very few. . . .Almost exclusively composed of commercial interests, as it is, its great need at present seems to be a manufacturing interest of some kind to preserve the proper balance of industry, and the best facilities in transportation, etc., are offered to the manufacturer who will bring one here. [3]

Probably more influential in J. W. Hocker's decision to return to his native Sussex County was the fact that relatives resided in Lewes. His wife's family, the Tunnells, were Lewes residents, and his younger brother, Ulysses W. Hocker, had moved his medical practice from Millville, Delaware, to Lewes after 1895. [4]

Established in Lewes in August 1899, the Hocker Manufacturing Company was incorporated in the state of Delaware on March 12, 1900. [5] The factory was located beside the Delaware, Maryland and Virginia

Railroad on Queen Ann Avenue. The company prospered, but Hocker became irritated by the control wielded by company stockholders. Feeling insufficiently rewarded for his work, J. W. Hocker gave notice that if he did not receive a substantial raise, he would leave the company. With no response from the directors, he left in July 1903. [6]

It was a difficult decision to make because it meant starting over again, purchasing and constructing new machinery, and finding new production facilities. Particularly distressing was the loss of his own brush machines. In good faith, J. W. Hocker had filed for and had been granted a patent for the brush machine he developed while in Philadelphia. [7] The machinery upon which Hocker held his patent was not in the hands of potential competitors. J. W. Hocker found that his patent rights provided no protection against the "borrowing" of his ideas. Without the financial and legal resources available to larger corporations, Hocker and subsequent generations of Hockers, reacted with a policy of jealously guarding innovations from inquiring ears and eyes.

With the financial assistance of his brother Ulysses, J. W. Hocker purchased a lot on Schley Avenue in Lewes for his new manufacturing facilities. [8] Work on the factory began in August 1903. [9] In order to purchase new machinery and continue development of his own brush machinery, J. W. Hocker incorporated the firm in early December 1904 as the Henlopen Manufacturing Company. [10] At that time, the factory of Schley Avenue was nearing completion, and the company employed sixteen people on the premises. [11]

Shortly after World War I, J. W. Hocker's sons, John W., Jr., and Harold W., joined the firm, and in 1922 bought out non-family stockholders. The Henlopen Manufacturing Company prospered under family direction despite a fire on 10 August 1933 that damaged an attached shed and part of the first floor of the factory of Schley Avenue. [12] Insurance settlements of $4,590.00, enabled the Hockers to recondition machinery and repair factory damages within a month's time. [13]

The firm continued successful operation, employing 25 to 30 persons through the 1930s and 1940s, until the deaths of J. W. Hocker in 1943, and J. W. Hocker, Jr. in 1947. Harold W. Hocker had left the family business in the early 1940s to raise poultry. Upon settlement of the estate of Mrs. J.W. Hocker in 1951, ownership of the Henlopen Manufacturing Company passed out of family hands. The factory on Schley Avenue was subsequenly closed and sold to the city of Lewes. [14]

The Hockers did not make a profound impact upon the economy of Lewes. The largest number of employees at any one time was 30 persons, whereas a nearby fertilizing plant employed over 100 hands. [15] Lewes did not become an industrial seaport, but the Hockers did establish a small successful business.

The main reasons for the success of the firm were J. W. Hocker's decision to emphasize brush production; the small size of the firm which enabled him to serve the particular needs of a limited market; and the use of the brush making machinery he developed.

He was virtually alone in the manufacture of tin handled mucilage brushes. His brother, George R. Hocker of Philadelphia, continued to produce tin cans and boxes rather than brushes, and he was subsequently overwhelmed by the competition of larger firms like the American Can Company and Continental Can Company. The small size of J. W. Hocker's company gave it the flexibility to meet customer demands. In addition, the market for tin handled mucilage brushes was limited and may not have attracted the larger firms.

J. W. Hocker invented and developed brush making machinery, which gave him a distinct advantage in brush manufacture. Following the loss of his first machines to the Hocker Manufacturing Company of Lewes, he continued development of his machines in secret, carefully guarding each innovation.

Materials and Processes

The development of the materials, processes and products of brush manufacturing by the Hocker family in Lewes took place during two extended periods in the history of the firm. The first, from 1903, when the factory on Shelby Street was established, until the demise of the family firm in 1951; the second, from the recommencement of brush manufacture by the Harold W. Hocker Manufacturing Company in 1953 until the present time. [16]

1903 to 1951

J. W. Hocker's firm, the Henlopen Manufacturing Company, produced two basic varieties of brushes: tin handled and wood handled.

The firm offered a wide selection of tin handled brushes of varying size and brush fiber. [17] The tin plate was sheet iron or steel coated with a thin layer of tin. There are several reasons why tin is an appropriate material for brush handles. One is that it is easily rolled and formed; it possesses the rigidity and strength of the iron or steel; and the tin coating resists the corrosive effects of both oxidation and the action of solvents and mild acids. [18] Natural fibers were used for the bristles, primarily Chinese hog bristles for use with acids, solvents, ink, dye, or mucilage, and goat hair or horse hair for use with paste or enamel. [19]

Wood handled brushes were made using wooden handle blanks fitted with aluminum ferrules. [20] Brush fiber was primarily goat hair or horse hair for use with water based paste.

The manufacture of brushes by the Henlopen Manufacturing Company involved both machine and hand work. The two-story frame factory building on Schley Avenue housed a machine shop on the first floor that included two lathes, one drill press, three power presses, one machine for rolling threads in tin screw caps, and shears. On the second story were kick presses modified for brush production, two or three brush machines designed by J. W. Hocker, and an area set aside for filling brushes by hand. An 8 horsepower Charter gas engine powered overhead shafting for the belt driven machinery. [21]

Tin plate for brush handles was cut into strips on foot-powered shears and rolled by machine into cylindrical form by either modified kick presses or on Hocker's own brush machine. [22] J. W. Hocker's machine also inserted a tuft of brush fiber into the open end of the tube, compressed the end of the tube upon the bristles, and trimmed the bristles. Brush handles formed on kick presses in dies were filled by hand using picking needles. The picking needle is a tool peculiar to the brush industry and was made by the Hockers for use by their employees. Awl handles were modified for this purpose. [23] Women of Lewes often filled brushes in their homes on a piecework basis.

Wood handle blanks were purchased from suppliers and fitted with ferrules fabricated from aluminum tubing by the Hockers. [24] Brush fiber was inserted in the ferrules using picking needles. Both tin handled and wood handled brushes were "tapped and trimmed" on a kick press which closed the metal around the bristles and trimmed the bristles in one motion.

The efficiency of Hocker's machinery facilitated rapid production and orders were filled immediately upon receipt. Virtually no inventory of finished brushes was kept on hand. Transportation was by rail, until the 1930s when the Hockers relied on trucking firms. Major clients included the Carter Ink Company, Bristol Myers Company, and the Royal Glue Company.

1953 to 1975

Two years after the closing of the Henlopen Company, Harold W. Hocker reentered the brush making business. [25] In 1953, he established a shop in a small frame building behind his residence at 224 Front Street, Lewes, Delaware. [Photos DE-7-1, 2] Erected in circa 1910-1911, the building served as office and storage space for the family firm. Harold purchased sheet metal shears, four kick presses, and dies from a former employee of the Henlopen Manufacturing Company. With the establishment of the H. W. Hocker Manufacturing Company, brush manufacture by a member of the Hocker family began again, but without the aid of special purpose brush making machinery pioneered by his father. That machinery had required little hand work or skill on the part of the machine operator. It produced standard brushes faster than the process of forming handles between dies on a kick press, hand filling, and "tapping and trimming" on a kick press.

In the process employed by Harold Hocker, tin sheet was cut into strips on shears and formed into handles on Ferracute Machine Company kick presses. Handles were filled by hand with picking needles and then tapped and trimmed on kick presses. He later purchased a handle forming machine, designed and built by Edward Breehand. [Photo DE-7-6] Another more efficient handle forming machine was constructed by a local machinist. [Photo DE-7-4], under Hocker's supervision This machine was still in use in 1975. Further modifications in brush production include a German made brush filling machine [Photo DE-7-3] and compressed air power assistance for the kick press used in tapping and trimming.

Today, sheet tin and other alloy materials are purchased in precut strips. Sheets are hand-fed into the handle forming machine [Photos DE-7-3, 5], which cuts and rolls the metal into tubes and drops them into a cardboard box. Average production capacity is 60 handles per minute. Handles are stacked in a box beside the filling machine.

Hocker's filling machine was imported from Germany in 1954. Originally designed to insert brush fiber in wooden scrub handles, Harold Hocker modified this machine to fill tin brush handles. Horse hair is currently used since hog bristles and goat hair, once imported from China, are no longer available. In one motion, the machine picks a load of brush fiber and bends it around a steel wire staple. Horse hair and staple then descend into the open brush handle held in a guide by the machine operator. Once filled, the brushes are stacked in a cardboard box and moved to the tapper and trimmer. A skilled operator can fill between 18 and 20 gross brushes per hour.

In one operation, the brushes are tapped and trimmed on a modified Ferracute Machine Company kick press, powered by compressed air. [Photo DE-7-8] The operator places the brush in a guide and actuates the press, which crimps the metal and cuts the brush fiber. Finished brushes are then placed in cardboard cartons and prepared for shipping.

Currently, the H. W. Hocker Manufacturing Company does not do a large volume business. Three persons are employed as machine operators and, with the high cost of materials and labor, profits are meager. Major clients are aircraft maintenance companies and industries that purchase the brushes for use with solvents and acids.

While it cannot be claimed that the Hockers' various companies in any way advanced engineering or industrial practice, the firm does represent the kind of small scale family firm that plays a major role in any economy.

NOTES

[1] Delaware State Directory for 1894-1895 (Wilmington: M. A. Costa, 1894), pp. 196-197.

[2] Oral interview with Harold W. Hocker, conducted by James Edmonson and Christopher Derganc, 24 June 1975. Original tape of interview on deposit at Eleutherian Mills Historical Library, Greenville-Wilmington, Delaware. Hereafter cited as HWH Interview.

[3] Delaware State Directory for 1894-1895. p. 197.

[4] HWH interview and Delaware State Directory for 1894-1895, p. 247.

[5] Acc 1502, Volume I, 12 March 1900.

[6] Acc 1502, Volume I, passim. Indications of the tension between J.W. Hocker and the directors of the Hocker Manufacturing Company are found in the entries made by Hocker in the weekly time books, especially during the month of July 1903. According to Harold W. Hocker, the Hocker Manufacturing Company continued production until ca. 1907 when Frederick L. Myers, a former employee of the company, purchased the machinery and established a brush factory on McFee Street in Lewes. The Frederick L. Myers Company is under the direction of Thomas Hocker, son of J. W. Hocker, Jr., and still manufactures brushes in a shop located on Kings Highway, Lewes. The McFee Street factory has been considerably altered and is now a private dwelling. The Queen Ann Avenue factory of the Hocker Manufacturing Company is no longer standing, having been destroyed by fire shortly after Myers bought the machinery.

[7] Patent No. 607,797 granted 16 July 1898.

[8] Company records in possession of H.W. Hocker (Hereafter cited as HWH Account Ledger #1) 6 August 1903, p. 1.

[9] HWH Account Ledger #1, p. 1.

[10] HWH Account Ledger #1, September 1903, p. 4.

[11] Acc 1502, Vol. II, p. 99.

[12] HWH Interview.

[13] Company records in possession of H. W. Hocker, correspondence from insurance adjuster Cornelius C. Marshall, 16 October 1933.

[14] HWH Interview.

[15] Delaware State Directory for 1894-1895, p. 197.

[16] HWH Interview.

[17] Trade catalogue of the Henlopen Manufacturing Company, original in possession of Harold W. Hocker, copy in Eleutherian Mills Historical Library, n.d. (circa first quarter 20th century). Includes description and illustrations of various products offered by the Henlopen Manufacturing Company.

[18] For an excellent account of the process of tin-plate manufacture and the development of the American tin-plate industry, see Pursell, Carroll W., Jr., "Tariff and Technology: The Foundation and Development of the American Tin-Plate Industry, 1872-1900," Technology and Culture, Vol. III, No. 3 (Summer, 1962), 267-284.

[19] Trade catalogue description of brushes offered by the Henlopen Manufacturing Company.

[20] Wooden blanks for handles were purchased from Bogert and Hopper of New York, and the Narragansett Machine Company of Providence. (See HWH Account Ledger #1, pp. 118 and 258, and trade catalogue of the Narragansett Machine Company (1890) in Eleutherian Mills Historical Library.)

[21] HMH Interview.

[22] Kick presses were purchased from the Ferracute Machine Company of Bridgeton, New Jersey (See HWH Account Ledger #1, p. 4).

[23] Examples of "picking needles" are to be found in the collection of the Hagley Museum, Greenville-Wilmington, Delaware, accession no. 75.24, 6a, b, c.

[24] Aluminum tubing used to fabricate ferrules was supplied by the Pittsburgh Reduction Company of Pittsburgh, and the Waterbury Brass Company of Waterbury, Connecticut. (See HWH Account Ledger # 1, pp. 82 and 285.)

[25] HWH Interview.

[26] According to correspondence between H. W. Hocker and the Kiwi Polish Company of Pottstown, Pennsylvania (Company records in possession of H. W. Hocker). Hocker wrote in April 1963:

> The reason for the disappearance of goat hair is that the majority of goat hair came from China and we no longer do business with this country. At the start of the Korean War, the government interned quite a quantity of Chinese Goat Hair and slowly released it over the years, but this supply is now exhausted and no new reliable sources have been found.

SOURCES

Unpublished

Oral interview with Harold W. Hocker, 24 June 1975. Discussion of history of brush making as practiced by the Hockers and by Harold W. Hocker today in his shop at 224 Front Street, Lewes, Delaware. Original tape of interview at Eleutherian Mills Historical Library, Greenville-Wilmington, Delaware.

Records of the Hocker Manufacturing Company (1899-1903), the Henlopen Manufacturing Company (1903-1951), and the H. W. Hocker Manufacturing Company (1953-present). Records include purchase of materials, machinery, transportation costs, wages, and sales. In possession of H. W. Hocker, 225 Second Street, Lewes, Delaware.

Accession 1502 Eleutherian Mills Historical Library. Three ledger books, 1899-1941, containing accounts and payroll records of the brush (and tin can) manufacturing companies operated by members of the Hocker family in Lewes, Delaware.

Published

Henlopen Manufacturing Company, trade catalogue. Henlopen, Mfg. Co., Inc., Manufacturer of Seamless Tin Boxes, Tin Handle Boxes, Water Well Paste Brushes, Screw Caps, Lewes, Delaware. Lewes, Delaware, n.d. Original in possession of H. W. Hocker, copy at Eleutherian Mills Historical Library.

Lewes, Delaware. Sanborn Map and Publishing Company, New York. 1904, 1910, 1922 and 1931.

United States Patent Office, Official Gazette of the United States Patent Office, Washington, 1872.